

## 229-D2 36383

Calculus Computer Lab  
Dr Matthew Sunderland

1. Synchronous lecture Friday 10:10–12:05  
<https://zoom.us/meeting/register/tJYud06sqjooHNegs0PYh2HgKUWkXYf7T06G>
2. Online problem sets (labs) due Sundays (9 days after each lecture)  
<https://bbhosted.cuny.edu>
3. Written assignments due some Sundays on  
<https://www.gradescope.com> course code M8PW4X
4. Reading assignments due each night before lecture  
<https://www.perusall.com> course code SUNDERLAND-GK4L9
5. MATLAB is required. Go to [https://www.mathworks.com/login?form\\_type=tah\\_portal&uri=https%3A%2F%2Fwww.mathworks.com%2Flicensecenter%2Ftotal\\_headcount%2F14317-60551-55097-39870-91449%3Fs\\_tid%3Dtah\\_po\\_start\\_cuny](https://www.mathworks.com/login?form_type=tah_portal&uri=https%3A%2F%2Fwww.mathworks.com%2Flicensecenter%2Ftotal_headcount%2F14317-60551-55097-39870-91449%3Fs_tid%3Dtah_po_start_cuny) click “No account? Create one!” and use your CSI email
6. Office hours [as of 10/13] every day 12–1 and 6–7  
<https://zoom.us/my/mattsunderland>
7. Announcements, Lecture Recordings, and Grades posted on  
<https://bbhosted.cuny.edu>
8. Platform for administering exams TBD,  
possibly Blackboard, Gradescope, WeBWorK, Respondus, or Proctortrack
9. Tutoring available at  
<https://www.csi.cuny.edu/students/academic-assistance/tutoring>

### Day 1 Homework

1. Download Zoom and create free account
2. Do Online Problem Set 1 (Lab 1) by Sunday 9/6
3. Submit Written Assignment 1 by Sunday 8/30—see last two pages of syllabus
4. Do first reading assignment (Lab 2) and make 1 comment by Thursday 9/3
5. Download and install MATLAB on your computer.
6. Do office hour survey <https://forms.gle/RRf74atLQkR3kg5DA>

$$\text{Course Grade} = \text{Average of} \left\{ \begin{array}{l} \text{Coursework} \\ \text{Exam 1} \\ \text{Exam 2} \\ \text{Final} \end{array} \right\} \left\{ \begin{array}{l} 1. \text{Lecture participation} \\ 2. \text{Online problem sets} \\ 3. \text{Written assignments} \\ 4. \text{Reading assignments} \end{array} \right.$$

**Lecture Recording Statement** *Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live.*

**Deadlines**   Add 9/1   Drop 9/15   Withdraw 11/6

Topics	Reading due - <b>Lecture date</b> - Problem set due
A. Lab 1. Using Matlab as a Calculator	- 8.28 - 9.6
B. Lab 2. Plotting Graphs	9.3 - 9.4 - 9.13
C. Lab 3. More on Graphs	9.10 - 9.11 - 9.27
D. Lab 4. Graphical Solutions to Equations	9.24 - 9.25 - 10.4
E. Lab 5. Investigating Limits	10.8 - 10.9 - 10.18
F. Lab 6. Approximate 1st & 2nd Derivatives	10.15 - 10.16 - 10.25
G. Lab 7. Critical and Inflection Points	10.22 - 10.23 - 11.1
H. Lab 8. Newton's Method	11.5 - 11.6 - 11.15
I. Lab 9. Optimization	11.12 - 11.13 - 11.22
J. Lab 10. Definite Integrals & Riemann Sums	11.19 - 11.20 - 11.29

Mon	Tue	Wed	Thu	Fri
				8.28 A
				9.4 B
				9.11 C
				9.25 D
				10.2 exam
				10.9 E
				10.16 F
				10.23 G
				10.30 exam
				11.6 H
				11.13 I
				11.20 J
		11.25 review		
				12.4 review

The College of Staten Island  
Department of Mathematics  
MTH 229 Calculus Computer Laboratory  
Fall 2012 Course Outline

The main objective of this course is to reinforce calculus concepts and explore the application of calculus to solving problems by making use of a series of computer projects. The student will be first introduced to mathematical software. In particular, MATLAB software will be used in this course. MATLAB has capabilities for both numerical and symbolic calculations. It can also create graphical output so that the results can be visualized more readily.

The following projects are integrated with the material covered in courses MTH 230 *Calculus I with Pre-Calculus* and MTH231 *Analytical Geometry and Calculus I*. Therefore, full appreciation of these projects requires a solid understanding of the course material.

1. Using MATLAB as a Calculator
2. Plotting Graphs in MATLAB
3. More on Graphing with MATLAB
4. Graphical Solutions to Equations
5. Investigating Limits in MATLAB
6. Approximate First and Second Derivatives
7. Critical and Inflection Points
8. Newton's Method
9. Optimization
10. Definite Integrals and Riemann Sums

- You will use the login ID and password, provided by your instructor, to gain access to the projects online at <http://www.math.csi.cuny.edu>. All course-work will be submitted electronically through the site.
- You will use the MATLAB software to perform the tasks described to you in the projects. Please note that MATLAB must be installed on your PC and is not 'embedded' in the web browser. MATLAB is installed in several of the campus computer labs. However, if you want to work from home, you can purchase the MATLAB & Simulink Student Version R2012a online at <http://www.mathworks.com/academia>
- If you wish to have a hardcopy of the projects, these are available at <http://www.lulu.com>, and then search on the words **csi math**. A booklet will be sent to you for a small fee.
- **Examinations: There will be a midterm and a final examination.**

# Written Assignment 1

Name \_\_\_\_\_ EMPLID \_\_\_\_\_

Course \_\_\_\_\_ Date \_\_\_\_\_

Directions: Upload your completed assignment to Gradescope as a PDF. For full credit, each page of your submission must be right side up and the pages must be in the correct order. If Gradescope asks you to match questions to pages, do so. Many students find it easier to type/annotate directly onto the PDF on the computer; other students prefer to print out the assignment, handwrite their answers, and then use a scanning app to get the completed assignment back onto the computer. If you scan, make sure you scan as a single PDF (with two pages) and make sure you scan as a document, not a picture (completely white background between text).

## Question 1.

Is this your first math course at CSI? If not, what math course did you take before this?

## Question 2.

What suggestions do you have for students to get excited about learning online?

**Question 3.**

Are you taking this course to satisfy a requirement? Some other reason?

**Question 4.**

Is there some grade in this course that you will strive to make?